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Serial No. 10/763,714
60130-1495; 02MRA0344

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Chien
Serial No.: 10/763,714
Filed: January 23, 2004
Examiner: Kramer, Devon C.
Group Art Unit: 3683
Title: INBOARD BRAKING TRAILER WHEEL END ASSEMBLY
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

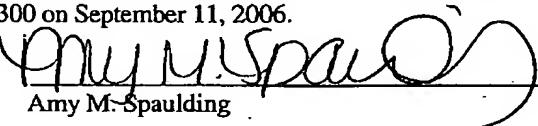
REPLY TO EXAMINER'S ANSWER

Dear Sir:

This paper is response to the revised Examiner's Answer Mailed July 11, 2006. No additional fees are believed due, however if any additional fees or credits are required they may be charged or applied to Deposit Account No. 50-1482 in the name of Carlson, Gaskey & Olds.

CERTIFICATE OF FACSIMILE

I hereby certify that this Reply to Examiner's Answer is being facsimile transmitted to the United States Patent and Trademark Office, 571-273-8300 on September 11, 2006.


Amy M. Spaulding

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(1) Rejection of claims 1, 4, 6, 13-14, 19-21 and 23-24 as anticipated by Attinger

Introduction

Appellant has now received the translation of the Attinger reference with the Examiner's Answer mailed March 2, 2006, after the Appeal Brief has been submitted. The translation of the Attinger reference was not provided at any time during prosecution.

Further, it should be noted that the Examiner's reading of the Attinger reference has changed from that provided all through the several office actions received during prosecution. During prosecution in the first office action and again in the final rejection, the hollow shafts (7 and 9) were read as meeting the housing limitation (Please see First office Action mailed September 8, 2004, page 3, section 5, Final office action mailed December 30, 2004, page 2 paragraph 3, and the Advisory action mailed on March 9, 2005, item 11). Now, in the Examiner's Answer, the Attinger transmission housing (5) is read as meeting the housing limitation and two scenarios are outlined to meet the axle shaft limitation. One reading combines the Attinger wheel-set shaft (3) with a hollow shaft (7) and a second reading combines the wheel-set shaft (3) with both hollow shafts (7 and 9).

The translation of Attinger along with the new readings of the Attinger reference clarifies the deficiencies of the rejections to the claims and that the rejections are improper and should be overturned.

Appellant is now faced with three different readings of Attinger as outlined by the Examiner. The first is that reading maintained in the First office action, the Final office action

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and the Advisory Action. The second and third are those that were explained in the Examiner's answer to Appellants brief.

First Interpretation of Attinger

During prosecution the Examiner read the Attinger hollow shaft (7) as the claimed housing and the wheel-set shaft (3) as meeting the axle shaft limitation. Claim 1 clearly requires that a rotor be attached to the axle shaft and outside of the housing. In Attinger, it is clear that the disk (11) is attached to the hollow shaft (7) and not the wheel-set shaft (3). Further it is also clear that the hollow shaft (7) is not a housing and therefore this reading is not supported and cannot be maintained. As is illustrated by the change in interpretation, Examiner also must believe this to be true as this reading maintained throughout prosecution is now missing from the Examiner's answer.

Second Interpretation of Attinger

The second (corresponding to Examiner's Scenario 1 found in Item 10 of the Examiner's Answer) reading is that the Attinger wheel-set axle (3) and hollow shafts (7 and 9) constitute the claimed axle shaft, and that the transmission housing (5) meets the claimed housing limitation. As is clear in the Attinger reference, the wheel-set shaft (3) is separate from the hollow shafts (7 and 9). In fact, the Attinger reference states that the "hollow shafts themselves are not fixed with respect to one another, but allow to a limited extend a relative motion of the wheel set shaft." (Translation of the Attinger Reference, page 3, first paragraph). For these reasons, the reading of

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the plurality of shafts that move relative to each other is not consistent with the interpretation of an axle shaft that a worker skilled in the art would reach.

Additionally, claims 1, 13 and 19 require that the axle shaft include a first end and a second end that each extend outside of the housing and that a rotor be attached to the axle shaft adjacent a second end. Neither of the hollow shafts (7 and 9) can meet these limitations. The hollow shaft (7) does not extend through the housing (5). Instead, the hollow shaft (7) includes a first end driven by a transmission device within the housing (5) and another end attached to a coupling (8). The hollow shaft (9) is attached at one end to the coupling (8) and at another end to the coupling (10) and does not include a rotor. (Please see Attinger translation, page 3, first paragraph). The wheel-set shaft (3) extends through the housing (5), but no rotor is attached to it. Accordingly, none of the shafts individually or combined are reasonably interpreted as having a rotor attached adjacent a second end.

However, the proposed Scenario 1 reading strains the interpretation of Attinger to define a second end as some point between the clear and defined ends of the hollow shaft (7). Such a reading is simply contrary to any conclusion that one skilled in the art would reach. The disk (11) in Attinger is clearly attached substantially in the center of the hollow shaft (7), between the coupling (8) and the transmission housing (5). Understandably, the Examiner is allowed to interpret the claim terms broadly. However, such interpretations are limited to what a worker skilled in the art would understand, and a worker skilled in the art would surely not understand the limitation "*attached to the axle shaft adjacent the second end*" to cover a rotor in the center of a hollow shaft. There is simply no rotor attached to or adjacent any shaft end disclosed in the

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Attinger reference, and therefore Attinger cannot disclose this limitation. Accordingly, as this reading is not proper, the rejections of claims 1, 13 and 19 based on this reading are not proper and should be overturned.

Third Interpretation of Attinger

The third (corresponding to Scenario 2) reading is that the axle shaft limitation of claims 1, 13 and 19 are met by that portion of the wheel-set axle (3) combined with the hollow shaft (7) on the left side of the transmission housing (5) as shown in the Attinger Figure. In Attinger, the first hollow shaft (7) is driven by a transmission arranged within the transmission housing (5). The second hollow shaft (9) is driven by the first hollow shaft (7) through the coupling (8). The second hollow shaft (9) is disposed within the first hollow shaft (7) and drives the wheel-set shaft (3) through a second coupling (10). (Translation of Attinger, page 4, last paragraph).

As appreciated, the hollow shaft (7) is not directly attached to the wheel-set shaft (3) and therefore reading the wheel-set shaft (3) and the hollow shaft (7) as an axle shaft does not make sense and is counter to any conclusion that could possibly be reached by a worker skilled in the art.

Further, Examiner's answer states that in this interpretation, the first end can be the portion of the wheel-set shaft (3) attached to the left wheel (2) and the second end can be that portion of the hollow shaft (7) near the housing (5), where the disk (11) is mounted adjacent the second end near the housing (5). Claims 1, 13 and 19 all require an axle shaft mounted or supported for rotation within a housing. As best understood, this interpretation requires both the

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first and second ends of the axle shaft to extend from the housing in the same direction, yet still be mounted for rotation within the housing. How can opposite ends of an axle shaft extend from a common side of a housing, and still be mounted for rotation within that housing? This reading is counter to what would be understood by a worker skilled in the art and therefore is improper, and the rejections based on this reading should be overturned.

(2) Rejection of claim 7 under 35 U.S.C. § 103(a) as being obvious over Attinger as modified in view of Anderson et al.

Claim 7 includes the limitation that the actuator is hydraulically actuated. The proposed modification of Attinger with the brake system disclosed in Anderson is not supported by any suggestion or motivation. Simply because Anderson discloses a hydraulic brake assembly does not suggest the desirability to make the proposed modification. Examiner's answer states that this is a simple design choice and that hydraulic brakes are well known throughout the art. However, such a statement does not provide the required suggestion and motivation to make a *prima facia* case of obviousness.

Anderson discloses a drive and brake assembly for an aircraft belt loader and states that an advantage of the brake system is to reduce space required in an inboard and outboard direction (Anderson Col 2, lines 23-25). The reduction in space is necessary in Anderson to add clearance for links and cylinders associated with the belt loader. The Attinger rail brake has no such constraints and has as a purpose the isolation of movement of the wheel-set shaft (3) from a brake member. Accordingly, the reduced space brake assembly of Anderson would provide no

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benefit to the Attinger rail brake. Without some benefit, there can be no suggestion or motivation, and thereby no *prima facia* case of obviousness. For these reasons, the rejection of claim 7 is improper and should be reversed.

(3) Rejection of claims 8,15, and 17 under 35 U.S.C. § 103(a) as being obvious over Attinger as modified in view of Inoue et al.

Claims 8 and 15 require bearing assemblies supported within the housing for supporting the axle shaft for rotation within the housing. Claim 17 requires a seal between the housing and the axle shaft.

The recently received translation reveals that the purpose of Attinger is to provide a braking system for a transmission arrangement that isolates the transmission from motion of the wheel-set shaft (3) (Translation of Attinger Page 3, first paragraph). Accordingly, the wheel-set shaft (3) in Attinger is supported by bearings (4) necessarily independent of any bearings within the transmission housing (5) to allow relative movement between the transmission housing (5) and the wheel-set shaft (3).

Accordingly, any modification to Attinger that proposes to support the wheel-set shaft (3) with bearings in the transmission housing (5) would destroy the intended operation of Attinger and is not proper. Accordingly, the rejection based on the proposed combination is not proper and should be reversed.

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(4) Rejection of claims 11-12, 18 and 22 under 35 U.S.C. § 103(a) as being obvious Attinger as modified in view of Seki.

Claim 11 requires the housing to be mountable to a suspension arm. Claim 12 depends from claim 12 and requires that the suspension arm is pivotally mountable to a frame of a motor vehicle. Claim 18 requires that the axle housing be mountable to a trailing arm, and that the trailing arm is pivotally mountable to a frame member on a first end and supported by a suspension member on a second end. Claim 22 also requires that the housing be supported on a trailing arm that is pivotally attachable to a vehicle frame member.

As discussed above relative to claims 8, 15 and 17, the newly received translation of Attinger renders this rejection improper as the proposed modification is counter to the very purpose of Attinger. No proposed combination or modification can render the base reference inoperable for the intended use.

As appreciated, the Attinger device provides a transmission housing (5) that is mounted to allow relative movement of the wheel-set shaft (3) relative to the transmission housing (5). To mount the housing (5) as proposed by this combination is counter to and would essentially destroy the intended operation of Attinger. Of course a proposed combination cannot destroy operation of the base reference. Accordingly, this rejection is improper and should be reversed.

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CONCLUSION

For the reasons set forth above, the rejection of all claims is improper and should be reversed. Appellant earnestly requests such an action.

Respectfully submitted,

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Dated: September 11, 2006